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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/718,007

11/20/2003

Alan Michael Jaffee

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09/14/2007

JOHNS MANVILLE
10100 WEST UTE AVENUE
LITTLETON, CO 80127

EXAMINER

MATZEK, MATTHEW D

ART UNIT

PAPER NUMBER

1771

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/718,007	Applicant(s) JAFEE ET AL.	
	Examiner Matthew D. Matzek	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 51-64, 71-84, 91-94 and 99 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 51-64, 71-84, 91-94 and 99 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/23/2007 has been entered.

2. Since the amendment has been entered the claim status of claims 51, 61 and 91 should be changed to reflect its entering. Claims 51-64, 71-84, 91-94 and 99 are currently active. The previous prior art rejection made in view of Geel has been withdrawn as the applied art fails to teach the now claimed foldability.

Claim Rejections - 35 USC § 112

3. Claims 51-64, 71-84, 91-94 and 99 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The new claim limitation of "...comprising a blend of fibers suitable for use as the scored and folded vertical webs spanning between an exposed mat and a backer mat in a compressible ceiling tile as described in published U.S. Patent Application No. 20020020142 filed April 23, 2001..." is improper. Claims may not incorporate or incorporate by reference another publication, but instead should clearly spelling out the intended structure, composition, etc. of the invention. For purposes of examination the aforementioned claim limitation has been interpreted as an intended use limitation that does not contribute to the structure or chemistry of the claimed article.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 51-64, 71-84, 91-94 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaffee (US 5,772,846) in view of Arkens et al. (US 5,661,213) and further evidenced by Chenoweth et al. (US 4,888,235).

a. Jaffee discloses a nonwoven glass fiber mat comprising a major portion of glass fibers and a minor portion of polymeric fibers with crosslinkable binder (abstract). The mat may be any weight but its preferred weight is from about 1.8 to about 2.2 pounds per 100 square feet (col. 3, lines 6-18). Examiner takes the position that about 2.3 pounds per 100 square feet is provided for by a teaching of about 2.2 pounds per 100 square feet because it is only 0.1 pounds per 100 square feet less than the claimed value and the claimed value is only measured to the nearest 0.1 pound per 100 square feet. The applied invention can also be pleated or thermoformed to produce a variety of composites and laminates (abstract) and as such is suitable for use as a scored and folded vertical web as now claimed. Jaffee's nonwoven mat comprises glass fibers with diameters of between about 9 and 20 microns and lengths of around one inch (col. 3, lines 34-61). The nonwoven mat further comprises polyester fibers of 1.5 denier with lengths as low as 0.25 inches (col. 3, lines 54-61) and acrylic or modified urea formaldehyde binder (Example 2). The binder may be present in the nonwoven mat at up to 35 weight percent of said mat (abstract). Example 1 provides for a mat thickness of 36 mils. Jaffee et al.

Art Unit: 1771

fail to teach the use of the claimed binder composition and the relative amounts of glass and polyester fibers.

b. While the mat of Jaffee provides the claimed fibers, the reference fails to use a binder that is at least partially cured and comprises before drying and curing a homopolymer or a copolymer of polyacrylic acid and a polyol.

c. Arkens et al. relates to a formaldehyde-free curable aqueous composition containing a polyacid, a polyol and a phosphorus-containing accelerator. The composition may be used as a binder for heat resistant nonwovens such as nonwovens composed of fiberglass. (Abstract) Arkens et al. teaches nonwovens that contain heat-resistant fibers such as for example, aramid fibers, certain polyester fibers, glass fibers, among others. By “heat-resistant fibers” is meant (in Arkens et al.), fibers which are substantially unaffected by exposure to temperatures above 125°C. (Refer to Col. 8, lines 23-31) The reference teaches that the polyacid may be a compound with a molecular weight less than about 1000 bearing at least two carboxylic acid groups and teaches that it may be a polymeric acid that is preferably an addition polymer formed from at least one ethylenically unsaturated monomer (such as methacrylic acid, acrylic acid, among others). (Refer to Col. 3, lines 45 through Col. 4, lines 1-5) The reference further teaches that the polyol may be triethanolamine (Col. 6, lines 1-6) The formaldehyde-free curable aqueous composition may also contain emulsifiers, pigments, fillers, colorants, wetting agents (*equated to hydrophilic material*), among other components. (Refer to col. 6, lines 52-57) The reference teaches a nonwoven substrate made from a fiberglass

Art Unit: 1771

fiber at 1.25 inches in length with a binder add-on of 28%. (Example 3) at a basis weight of 1.75 pounds per 100 sq. feet.

d. Since both references are directed to glass fiber nonwoven mats comprising such heat-resistant fibers (aramid, polyester, glass fibers, etc.), the purpose disclosed by Arkens et al. would have been recognized in the pertinent art of Jaffee.

e. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the mats of Jaffee and provide them with the binder composition of Arkens et al. with the motivation of producing a heat-resistant nonwovens without formaldehyde as disclosed by Arkens et al. (col. 1, lines 11-55).

f. Although the prior art of Jaffee in combination with Arkens et al. does not explicitly teach the claimed ratio of wet tensile strength to dry tensile strength and the claimed Taber Stiffness it is reasonable to presume that this property is inherent to a mat from the combination of Jaffee and Arkens. Support for said presumption is found in the use of like materials (i.e. nonwoven mat that includes glass fibers and polyester fibers, with a binder that prior to curing includes a polyacid and a polyol similar to the one claimed herein). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of wet tensile strength/dry tensile strength and the Taber Stiffness would obviously have been present one the product form the combination of Jaffee and Arkens is provided. Reliance upon inherency is not improper even though rejection is based on Section 103 instead of Section 102. *In re Skoner, et al.* (CCPA) 186 USPQ 80

- g. With regards to the claimed property of passing the NFPA Method #701 Flammability Test, it is the Examiner's position that such property will also be inherent to the structure from the combination of Jaffee and Arkens et al. for the same reasons stated in the paragraph above. Applicant's ranges for the concentration of polyester fibers are broad and encompass typical values that are found in the prior art as evidenced by Chenoweth et al. (Refer to Abstract and Table I). Since each of the elements are recognized as result effective variables in this field of endeavor and it has been held that discovering optimum values would have been or result effective variables involves only routine experimentation.
- h. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the combined article of Jaffee/Arkens et al./Chenoweth et al. with the instantly claimed basis weights, thicknesses, binder percentage and fiber composition, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.
- i. The limitation of "the web being bound together by a binder that is at least partially cured and consists essentially of, before drying and curing, a homopolymer or a copolymer of polyacrylic acid and a polyol" is met by the composition of Arkens et al. and for the purposes of searching for and applying prior art under 35 U.S.C. 102 and 103, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." See, e.g., *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355.

Double Patenting

5. Claims 51-64, 71-84, 91-94 and 99 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 62-82 and 85-89 and 92-996 of copending Application No. 10/717,802 in view of Jaffee (US 5,772,846). The claims of the copending application fail to teach the inclusion of man-made polymer fibers as a blend with glass fibers. Jaffee discloses a nonwoven glass fiber mat comprising a major portion of glass fibers and a minor portion of polyester fibers with crosslinkable binder (abstract). The mat may be any weight but its preferred weight is from about 1.8 to about 2.2 pounds per 100 square feet (col. 3, lines 6-18). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to provide the polymer fibers because it is well known to use a minor portion of synthetic polymer fibers like polyester in form insulation facers (col. 3, lines 47-52).

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

6. Applicant's arguments with respect to claims 51-64, 71-84, 91-94 and 99 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is 571.272.2423. The examiner can normally be reached on M-F, 9-5:30.

Art Unit: 1771

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571.272.1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew D Matzek/
Examiner, Art Unit 1771

/Terrel Morris/
Terrel Morris
Supervisory Patent Examiner
Group Art Unit 1771